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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,947	12/10/2003	Justin L. Kreuzer	1857.0140002/JDE	6299

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WASHINGTON, DC 20005

EXAMINER

FINEMAN, LEE A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,947

Applicant(s)

KREUZER, JUSTIN L.

Examiner

Lee Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/10/03 & 1/17/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 January 2006 has been entered in which claim 1 was amended. Claims 1-12 are pending.

Drawings

2. The replacement drawing for fig. 6 was received on 17 January 2006. This drawing is acceptable.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto, JP 06-215997 A in view of Owen et al., US 5,593,606.

Regarding claim 1, Matsumoto et al. disclose an optical system (fig. 1) comprising: a wave plate (16); a reticle (14); and a first optical device (13), wherein the reticle is positioned

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along an axis of a light beam path (fig. 1) between a source (20) of the light beam and the first optical device (13), and wherein the wave plate (16) is positioned along the axis (fig. 1) next to the reticle (14) and before the first optical device (13). Matsumoto disclose the claimed invention except for wherein said wave plate is a variable wave plate. Owen et al. teach a variable wave plate (see 42 in fig. 1 and col. 4, lines 13-19) positioned along an axis of a light beam path before a first optical device (fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the wave plate of Matsumoto be variable, as taught by Owen et al., for at least the purpose of enabling a user of said optical system to make adjustments, when necessary to ensure that the wave plate imparts the desired degree of polarization to light propagating through said optical system.

Regarding claims 4 and 7, Matsumoto further disclose wherein the first optical device comprises: a first lens group (13) positioned along the axis (fig. 1); a reflective device (12) positioned to receive light from said first lens group (fig. 1); and a second lens group (18) positioned to receive light from said reflective device (12); and wherein the reflective device directs light exiting the first lens group toward the second lens group (fig. 1)

Regarding claims 8-10, Matsumoto further disclose a beam directing system (12 and 15) positioned to receive light from said first optical device (13); and a second optical device (18) positioned to receive light from the beam directed system (fig. 1); a beam splitter (15) positioned to receive light from the first optical system (13) and direct light toward the second optical system (18); and a reflective device (12) positioned to receive light from the beam splitter (15) and reflect light toward the beam splitter (fig. 1); and wherein light exiting the first optical device (13) is directed to the reflective device (12) using the beam splitter (15, in at least so far

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as it has been turned by the beam splitter); and light reflected from the reflective device (12) is passed through the beam splitter (15) and is received by the second optical device (18).

Regarding claims 5, 6 and 12, Matsumoto in view of Owen et al. as set forth above, disclose the claimed invention except for explicitly stating the net optical power of the lens groups. Official notice is taken that the net optical power of a lens group is provided to converge or diverge the beam of light accordingly. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the net power of the lens groups positive or negative as claimed to direct (converge or diverge) the light as needed in the system. It is noted as directed by the MPEP 2144.03 that if the applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). As such, the above official notice statement of the examiner is now held to be admitted prior art.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto in view of Owen et al., as applied to claim 1 above, and further in view of Zhang et al. US 5,952,818.

Matsumoto in view of Owen et al., as applied to claim 1 above disclose the claimed invention except for wherein said variable wave plate is a Berek compensator. Zhang et al. teach the use of a Berek compensator as a variable wave plate. (fig. 1, compensator C and col. 7, lines 23-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the variable wave plate Matsumoto in view of Owen et al. be a

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Beck compensator, as taught by Zhang et al., for at least the purpose of enabling fine control of the polarization state of light in said optical system.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto in view of Owen et al., as applied to claim 1 above, and further in view of Johnson et al. US 4,342,517.

Matsumoto in view of Owen et al., as applied to claim 1 above disclose the claimed invention except for wherein said variable wave plate is a Soleil-Babinet compensator. Johnson et al. teach the use of a Soleil-Babinet compensator as a variable wave plate. (col. 4, lines 34-35). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the variable wave plate of Matsumoto in view of Owen et al. be a Soleil-Babinet compensator, as taught by Johnson et al., for at least the purpose of enabling fine control of the polarization state of light in said optical system.

Allowable Subject Matter

7. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: Claim 11 has allowable subject matter over the prior art for at least the reason that the prior art

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fails to teach and/or suggest a first quarter-wave plate positioned between the beam splitter and the reflective device as set forth in the claimed combination.

Matsumoto further comprises a beam splitter (15) and a second quarter-wave plate (17) positioned between the beam splitter (15) and the reflective device (12) but it does not have a first quarter-wave plate (in addition to the variable wave plate as set forth above) positioned between the beam splitter and the reflective device as claimed.

Response to Arguments

9. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

10. After careful review of the claims, it is found that an obvious rejection is appropriate for claims 9 and 10. The examiner regrets any inconvenience caused by this action.

11. It is noted by the Examiner that the drawing and specification objections made in the previous Office Action have been withdrawn due to amendment by the Applicant.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Palmer et al., US 5,442,184 disclose an optical system with a wave plate and reticle next to each other.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF
March 29, 2006


MARK A. ROBINSON
PRIMARY EXAMINER